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MEDICAL DIATHERMY IN PROSTATITIS AND SEMINAL VESICULITIS *

ALFRED E. JONES, M.D.
CHICAGO

We are all agreed that the therapeutic efficacy of diathermy is based on the production of heat within the tissues by transforming electrical into caloric energy. To introduce intrastructural heat without any undesirable side effects, such as muscular contractions, electrolysis and pain, requires the employment of high frequency currents as the source of electrical energy. Heating through of tissues actually produces two biologic reactions: Stimulation of the blood and lymph circulation, and the attraction of the defensive cells of the body to the areas of increased metabolism. That these cells are intimately connected with all phases of immunization is today a recognized fact. If therefore one considers the therapeutic difficulties presented by prostatitis and seminal vesiculitis, the proper administration of this form of heat very forcibly suggests itself as the most direct therapy at our command.

In no branch of practice has medical diathermy proved itself more useful than in the management of certain morbid conditions occurring in the genito-urinary tract. It has been directed especially toward the very prevalent gonococcus and its ravages upon human tissues, but its usefulness is by no means confined to this infection alone. As the activity of the circulation is increased by heat, the blood carried to the area under treatment will also be supplied with elements for combating infection. At the same time, the increased temperature in itself has a marked bactericidal effect. Graves[1] has aptly expressed it when he said: "Heat serves a double purpose in producing conditions more favorable for the host and less favorable for the invading organisms."

The value of diathermy is generally better appreciated in acute conditions than in those of long standing, and it is for this reason that we wish to emphasize our success in chronic prostatitis and seminal vesiculitis. This should not be taken to mean that we are opposed to its use in acute conditions. On the contrary, medical diathermy applied to these organs during the acute state brought immediate relief to some of the most distressing symptoms under our observation, and has undoubtedly played a conspicuous part in the permanent eradication of the disease. The application of heat to these structures assures absorption of inflammatory products, hence "stripping" is made easier and the reaction rendered more satisfactory. This in turn is also of aid in the final control of the morbid condition. The distressing, referred pains, which are so often an accompaniment of acute inflammation of the prostate and vesicles, are very promptly relieved by suitably applied medical diathermy.

Chronic Cases. In obstinate prostatic and vesicular inflammation which has existed for long periods and proved resistant to all the regular methods of treatment, diathermy has, in our opinion, brought about remarkable results. Some of these patients had for years been receiving massage, silver nitrate, and other instillations, and all the other traditional treatments of prostatitis and vesiculitis without any definite improvement. When these same patients received diathermy, alone, the improvement was striking. In other cases diathermy was combined with protein therapy and this combination has sometimes proved more effective than either method used exclusively. Protein therapy without diathermy has not been fully satisfactory in our experience. Not all patients react equally well to any

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one form of treatment. The individual must be studied and the treatment decided upon after a careful consideration of all factors. But our success with this method has been so uniform that we have no hesitation in urging those who have never tried it to do so.

Adjunct Protein Therapy. The value of this relatively new method of treatment of inflammations of prostate and vesicles can hardly be overestimated, because if we except Belfield's[2] operation of vasostomy, introduced in 1913, and medical diathermy suggested by Kolischer in 1920, nothing new has been added to our resources for combating these conditions in more than a quarter of a century. As chronic prostatitis and vesiculitis are practically always coincident, our efforts must be directed against inflammatory conditions in both of these parts of the genito-urinary tract. The addition of protein therapy to diathermic treatment, using both stock and autogenous vaccines as well as the various forms of nonspecific proteins, is widely accepted as a worthwhile procedure, but it has been our experience that though a most valuable aid, it should only be considered as such.

Limitation of Surgical Treatment. The method employed and advocated by Belfield, which consists of an incision into the vas deferens through which a needle can be passed and antiseptic solutions injected, was a marked advance over the previous attempts to reach inflammatory areas in this part of the genital canal. Nevertheless, the wide popularity first obtained by this method has now subsided, and we find few urologists employing it today despite the fact that it is by far the easiest and simplest manner of applying medication direct to the vesicles. Its usefulness has not stood the test of time.

Incision and drainage of the chronically infected prostate and vesicles are advocated by Morrissey[3], of the New York Hospital, who published a number of papers on this subject some eight or ten years ago. His results in large series of cases, such as are available in huge metropolitan clinics, are impressive; but his technic, which he describes as "a combination of the methods devised by Young and Squier (with) . . . a number of new features and conservative modifications which contribute largely to the safety of the operation," is far too elaborate to be carried out anywhere except in surroundings such as are available to Morrissey, himself. In the routine of urological practice many patients are seen who must have relief, yet are unwilling or unable (financially or otherwise) to undergo such an operative procedure. Yet they are equally unwilling to continue the oldtime massage, sitz bath, hot rectal douche and silver solution instillations, all of which are the usual alternatives to surgical intervention.

Value of Diathermy

For the average sufferer from prostatis and seminal vesiculitis — the type of patient who makes up a large percentage of everyday urologic practice — diathermy offers a middle course between surgery and palliative treatment, which in our experience has stood the test of more than ten years constant employment and still remains the most efficient and generally satisfactory means of dealing with these troublesome conditions.

The only drawback which can be cited against diathermy in the therapy of these pathologic states, is the amount of time which must be spent in its application. We have found that unless the patient receives the diathermic current for at least thirty minutes, we cannot look for much improvement. The Greenbergers assert that the duration of treatment should be at least forty-five minutes, and a full hour is preferable. They found the point of tolerance usually to vary between 500 ma. and 1700 ma. The patient is placed in the dorsal position and the rectal electrode lubricated and introduced very slowly until the metal surface comes in direct contact with the point of greatest tenderness. In this way they claim to have aborted acute prostatic abscess.

This appeals to us as being slightly heroic treatment. The mistake is often made of applying too much heat, so that instead of stimulating the defensive forces we inhibit them. This of, of course, precisely the opposite of the effect we desire to obtain.

Individuals vary greatly in their tolerance to heat, and this must be gauged before the treatment is instituted to its fullest extent. If one "sneaks in" with the current until the patient is sensible only of a soothing warmth, his capacity will be readily estimated. To ascertain this requires about five minutes of treatment and the reading of the amount of amperage registered by the milliamperemeter. Painful contractions of the rectum, which sometimes occur during the first few treatments gradually disappear and the rectal tolerance increases with each succeeding treatment. If the rectal electrode is supported or held in place by sandbags, the annoyance of its possible slipping out of place is prevented. Each instrument is a unit in itself and so is the reaction of each individual patient. We cannot manipulate the machine by rule of thumb any more than we can ignore the idiosyncrasies of the individual. The same caution must be observed with each patient and at each session.

Review of Cases of Chronic Prostatitis and Vesiculitis

In our office records for the past ten years, we find 210 cases of chronic prostatitis and seminal vesiculitis that have been treated by diathermy alone, or by diathermy in combination with protein therapy. The average number of diathermic treatments received by these patients was 24; the average number of protein injections, 6. The greatest number of diathermic treatments in any one case was 56; the highest number of protein injections, 14. One patient was under treatment for four months but the average time of treatment was six weeks.

Of the entire series, 78 per cent are listed as having obtained a definite clinical cure. This is taken to mean complete relief of all subjective symptoms, with the urine clear on repeated examination. In addition, 28 cases, or approximately 13 per cent showed marked improvement from the standpoint of relief of the most distressing symptoms with a reduction of the bacterial count in the urine, although the urine was not wholly free from pus when the treatment was discontinued. Eighteen cases, or about 9 per cent showed no definite improvement either symptomatically or clarification of the urinary sediment. A few in this group admitted some relief from pain, burning, frequency of urination immediately after the treatment, but they stated that this relief was but temporary, lasting at most until the next day. These cases we were obliged to recognize as failures, surgery being the only recourse left for them. It is most instructing and interesting, however, to note that not a single one of these records shows that our recommendation for surgery was accepted.

Conclusions

Considering the remarkable resistance to treatment usually displayed by chronic inflammations of the prostate and vesicles, a ten-year record of having cured clinically practically eight out of every ten patients by a combination of diathermy and protein therapy, represents a result of notable achievement and one offering a strong recommendation for that therapeutic procedure.

We also feel that the efficiency of protein therapy has been shown to be greatly enhanced by its use in connection with locally applied diathermic treatments. We regard this combination as far superior to any other method of treatment now employed in urologic practice for these chronic inflammations.

A wider appreciation of the simplicity and efficiency of the method will lead to a very general raising of the average of success in the management of these vexatious and stubborn conditions.

108 N. State St.

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